

Approval to Fly sUAS: Army Perspective



**SMALL UNMANNED AIRCRAFT SYSTEMS (SUAS) USE IN CONSERVATION
RESOURCE MANAGEMENT**

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APPROVAL TO FLY- ARMY PERSPECTIVE



- SES partnered with U.S. Army Dugway Proving Ground and was awarded an Environmental Security Technology Certification Program (ESTCP) in 2018.



- Project: Use of sUAS/UAS to Cost Effectively Monitor Eagle Nesting

DEFINE THE REQUIREMENT



First step was to define the requirement:

- Monitor Golden Eagles in restricted airspace on a Major Range and Test Facility Base (MRTFB)
 - Obtain high resolution videos/photos
- System must be cybersecure
- Maximum flight time available

IDENTIFYING THE GAP



What we had:

- Commercial pilots with FAA Part 107 certification.
- Experience working on active military training range.
- Support from Dugway Proving Ground Natural Resources Office and the Rapid Integration and Acceptance Center for the project.

What we needed:

- An approved sUAS.
- An Exemption to Policy (waiver) to fly the approved sUAS.
- Training on the sUAS platform

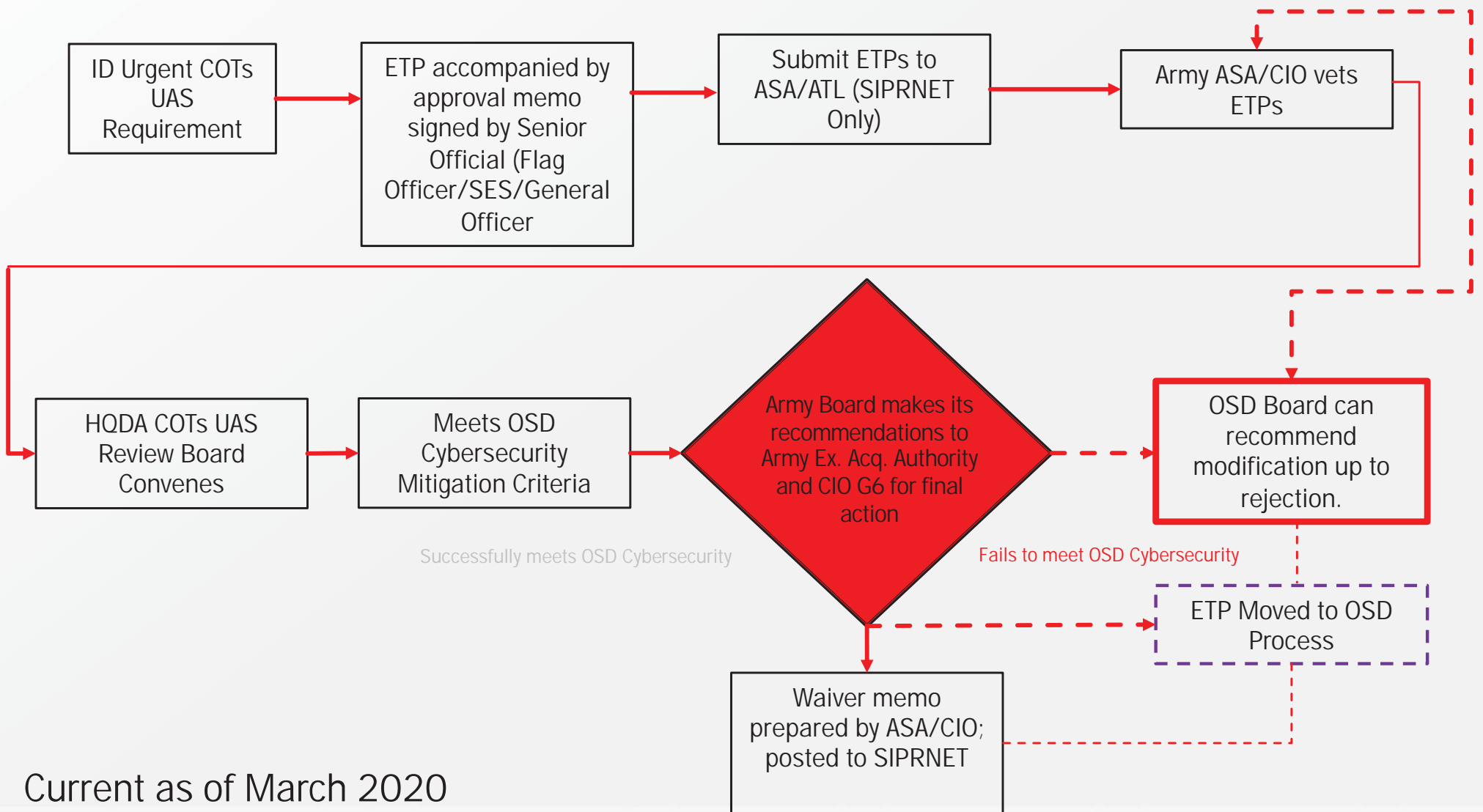
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Waiver Package Includes:
Senior Level Memo and Exemption to Policy Request
Copy of Airworthiness Release
Copy of Standard Operating Procedures
Copy of System Safety Management Plan
Copy of Material Risk Acceptance Memo
Copy of Operational Risk Memo



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Current as of March 2020

OUR STORY



DoD Memo- "Unmanned Aerial Vehicle Systems Cybersecurity Vulnerabilities," May 23, 2018.

DJI Matrice 600 with RIZER Mitigation software

Project Funded



DoD Memo



Army TSMO

Waiver 6 months



Waiver Renewal



Flight Season Complete

New Flight Season

DPG Request for Waiver

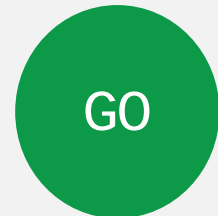
Change in Policy



New Platform

TSMO Request for Waiver

Approved



EmergentRC E900

ALARACT 029/2019 and NDAA language Prohibition on Operation or Procurement of Foreign-made Unmanned Aircraft Systems.

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Lessons Learned

- Patience and Persistence
- Flexibility with evolving guidance
- Additional costs
- Approval authority
- Trained pilots familiar with DoD
- Schedule-allow more time than you think you need
- Access to SMEs
- Technology limitations

CONTINUAL CHANGE



- Anticipate further changes in the approval process.
- Anticipate availability of additional cybersecure sUAS manufactured in U.S.
- Anticipate improvement in flight time (battery technology).
- Anticipate improved payload capability.

- Approval process is decentralized
 - Consider using a SME to guide you through the process for your service.
- Consider using a SME to assist with choosing platform/payload that meets your requirement.
- Always ensure you are using current policy/directive.
- Need champions